

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The concentration of the *Agrobacterium* suspension was 10⁶ cells/ml (A), 10⁷ cells/ml (B), 10⁸ cells/ml (C), and 10⁹ cells/ml (D). The concentration of the *Agrobacterium* suspension was 10⁶ cells/ml (A), 10⁷ cells/ml (B), 10⁸ cells/ml (C), and 10⁹ cells/ml (D). The concentration of the *Agrobacterium* suspension was 10⁶ cells/ml (A), 10⁷ cells/ml (B), 10⁸ cells/ml (C), and 10⁹ cells/ml (D).

Claim 2. (Amended) A 3-5 group compound semiconductor having a structure in which a layer (B) composed of a 3-5 group compound semiconductor represented by the general formula $\text{In}_u\text{Ga}_v\text{Al}_w\text{N}$ ($u+v+w=1$, $0 \leq u \leq 1$, $0 \leq v \leq 1$, $0 \leq w \leq 1$) is adjacent to a layer (A) composed of a 3-5 group compound semiconductor represented by the general formula $\text{In}_x\text{Ga}_y\text{Al}_z\text{N}$ ($x+y+z=1$, $0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq z \leq 1$) in which the concentration of an n-type carrier is $1 \times 10^{17} \text{ cm}^{-3}$ or less, wherein the concentration of a p-type dopant is $1 \times 10^{17} \text{ cm}^{-3}$ or more and $1 \times 10^{21} \text{ cm}^{-3}$ or less, and the band gap is larger than that of said layer (B).

Claim 3. (Amended) A 3-5 group compound semiconductor having a structure in which a layer A composed of at least one of group III and group V elements represented by the general formula:

$$\text{In}_x\text{Al}_y\text{N}_{z+y+z-1}, \quad x > 0, y > 0, z > 0$$

in which the concentration of donor-type carrier is $\geq 1 \times 10^{18} \text{ cm}^{-3}$ or less, where in the concentration of acceptor-type carrier is $< 1 \times 10^{17} \text{ cm}^{-3}$.

Claim 4. (Amended) A 3-5 group compound semiconductor having a structure comprising at least one layer (A) composed of a 3-5 group compound semiconductor represented by the general formula $\text{In}_x\text{Ga}_y\text{Al}_z\text{N}$ ($x+y+z=1$, $0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq z \leq 1$) in which the concentration of an n-type carrier is $1 \times 10^{17} \text{ cm}^{-3}$ or less, wherein the concentration of a p-type dopant is $1 \times 10^{17} \text{ cm}^{-3}$ or more and $1 \times 10^{17} \text{ cm}^{-3}$ or less, between a layer (B) composed of a 3-5 group compound semiconductor represented by the general formula $\text{In}_u\text{Ga}_v\text{Al}_w\text{N}$ ($u+v+w=1$, $0 \leq u \leq 1$, $0 \leq v \leq 1$, $0 \leq w \leq 1$) and a layer (C) composed of a p-type 3-5 group compound semiconductor represented by the general formula $\text{In}_a\text{Ga}_b\text{Al}_c\text{N}$ ($a+b+c=1$, $0 \leq a \leq 1$, $0 \leq b \leq 1$, $0 \leq c \leq 1$).

Claim 5. (Amended) A 3-5 group compound semiconductor having a structure comprising a layer (B) composed of a 3-5 group compound semiconductor represented by the general formula $\text{In}_u\text{Ga}_v\text{Al}_w\text{N}$ ($u+v+w=1$, $0 \leq u \leq 1$, $0 \leq v \leq 1$, $0 \leq w \leq 1$) having therein a laminated layer (C) composed of an n-type 3-5 group compound semiconductor represented by the general formula

represented by the general formula $\text{In}_a\text{Ga}_b\text{Al}_c\text{N}$ (where $a, b, c = 0$ to 1 , $a+b+c=1$) in which the concentration of an n-type carrier is $1 \times 10^{17} \text{ cm}^{-3}$ or less, wherein the concentration of a p-type dopant is $1 \times 10^{17} \text{ cm}^{-3}$ or more and $1 \times 10^{18} \text{ cm}^{-3}$ or less, between said layer (D) composed of the n-type 3-5 group compound semiconductor and a layer (C) composed of a p-type 3-5 group compound semiconductor represented by the general formula $\text{In}_a\text{Ga}_b\text{Al}_c\text{N}$ ($a+b+c=1$, $0 \leq a \leq 1$, $0 \leq b \leq 1$, $0 \leq c \leq 1$), on the opposite side to said layer (B).

Claim 6. (Amended) The 3-5 group compound semiconductor according to any one of claims 1 to 5 wherein the p-type dopant is Mg and/or Zn.

Claim 7. (Amended) A method of producing a 3-5 group compound semiconductor according to any one of claims 1 to 5, comprising a step of forming a p-type compound semiconductor represented by the general formula $\text{In}_a\text{Ga}_b\text{Al}_c\text{N}$ (where $a, b, c = 0$ to 1 , $a+b+c=1$) in which the concentration of an n-type carrier is $1 \times 10^{17} \text{ cm}^{-3}$ or less, wherein the concentration of a

Claim 8. Amended: A light emitting device obtained by using a 3-5 group compound semiconductor according to any one of claims 1 to 5.

Please add the following new claim:

--Claim 9. The 3-5 group compound semiconductor according to claim 1, wherein a single layer contains the n-type carrier and the p-type dopant.--